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EXTRA-UTERINE PREGNANCY.

Report of a Case of Extra-Uterine Pregnancy.

Synchronus with Uterine Pregnancy—Fœtus in Utero of Three Months—Fœtus in Abdominal Cavity of Sixteen Months—Operation—Recovery.

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Extra uterine or tubal pregnancy is a condition far more frequent in occurrence than is recognized either by the general practitioner or the specialist. The symptoms are supposed to be so conclusive and unmistakable in their nature that it is the common opinion that so great an anomally can never go unheralded. It is our belief, however, that very many cases are unrecognizable by the signs laid down in the books, and that only a constant watchfulness—with the fact of its frequency always in mind—can lead to accurate diagnosis in this most fatal accident to which woman is exposed.

We report this case as one of a most unusual train of symptoms in which the condition was never even surmised through sixteen months of imminent peril to the patient's life.

September 27, 1894, there was admitted to Christ's Hospital, Topeka, Mrs. C. N., aged 30, until September 1 a resident of Ohio; married twelve years; only one child, born the year after her marriage; no miscarriages; her labor and recovery had been uneventful. Subsequent menstruation never irregular though somewhat painful, due, she had been told, to a slight displacement of the womb. Her sickness dated from August, 1893, and owing to her recent change of residence her own statements were the only available source of information concerning the progress of her trouble. She had, moreover, been told so many strange things about herself and her peculiar trouble that it was hard to differentiate between what she had really experienced and what some doctor had said.

But her history sifted out from her story is as follows: On August 20, 1893, the third day of her regular menstrual period, she had been working very hard getting dinner for twenty-five people, and was sitting in a chair in her dooryard at evening when she was taken with a chill so severe that she was obliged to call assistance to get into the house. Upon being carried in she was seized with a convulsion. She lay on her back all night and as her husband tried to help her turn in the morning a second and then a third convulsion took place. In the meantime her abdomen bloated until it was as tight as a drum.

The bloating remained for several days, and during that time her bowels were obstinately constipated and it was necessary to use a catheter.

Upon being questioned she maintained that she had been in her usual health all Summer, had menstruated regularly and without an unusual sign. At the time of seizure there was no faintness nor did she lose consciousness at any time, but had full possession of her faculties while the convulsions were upon her. In three or four days she was better, the bloating partially subsided, but there was a weight and pain in the abdomen so severe that she was obliged

to stay in bed all during September. Toward the end of the month she menstruated normally and without undue suffering. In October she sat up for a few days. She began to menstruate at the usual time in October, but on the second or third day of the period was again seized with a chill, followed by two convulsions upon attempting to turn in bed. Again she became bloated, bowels constipated and urine retained. She remained in bed and the November period was passed with the ordinary flow and not much suffering. The right side kept enlarging all this time and was so tender that the slightest pressure of the doctor's hand was unendurable. During this month she was examined several times, but the doctor insisted that there was nothing the matter so far as the uterus was concerned. In December she was so much better that she walked around for some days. There was very little pain and what seemed to be a natural flow.

January 1, 1894, she over-exerted herself and was obliged to stay in bed. Was stiff and sore in every muscle, and bloated until she looked like a woman at full term. Toward the last of the month she began to flow profusely and the hemorrhage continued for nine weeks. By this time the milk was so abundant in her breasts that the attending physicians decided that she was pregnant, and assured her if she only would have patience her baby would come all right.

The pain became excruciating, referred chiefly to the epigastric region, and of a wrenching, twisting quality, so that it seemed as if it would tear her in two. She could not distinguish anything like ordinary fœtal movements, but rather a constant throbbing, which increased until she described it as a thumping in the right side. By the last of January it was necessary to administer morphine hypodermically, and to continue its administration in increasing doses three or four times daily until the last of March.

About the time for her regular menstrual flow in March the hemorrhage increased, and for three or four days was accompanied by severe bearing down pain, spasmodic and of increasing violence.

She passed some clots, but more of what she described as large pieces of fleshy liver looking substance not like blood clots. She vomited for two days and the bed was saturated again and again from supposed incontinence of urine.

Then quite unexpectedly near the end of the month the pain subsided, bloating went down, and her abdomen became greatly reduced in size. She began to convalesce until in May she was able to sit up. By June she was on her feet and about the house and gaining in weight.

Before her sickness she had been a remarkably well nourished woman weighing 190 pounds. By the end of March she had lost 60 pounds. No hemorrhage or sign of menstruation appeared after the last of March.

September 7 she came to Kansas, and on the 19th she consulted an irregular specialist of Topeka for an opinion upon the cause of the non-appearance of her menses. The specialist obligingly passed a sound into the uterus to the depth of four inches and sent her to her home ten miles north of the city. That night she was taken with a violent hemorrhage which continued through the next day. A fœtus four inches long was expelled, and Dr. J. W. Pettijohn, of Hoyt, arrived in time to deliver portions of the secundines. There was no evidence of decomposition, but hemorrhage and secundines were perfectly fresh and sweet, showing the death of the embryo to be the immediate consequence of the sound introduced the day before. The doctor recognized the presence of a condition outside and separate from the uterus which demanded hospital treatment, and he therefore brought his patient to the hospital five days later.

With this history an examination of the patient was entered upon. The uterus was found turned forward and enlarged so that the fundus was easily felt through the abdominal wall. The os was soft and patulous, shreds of secundines still to be felt attached to its borders—but there was nothing out of the ordinary for a uterus that had

just aborted at three or three and a half months.

On the right side, well out of the pelvis and extending across the abdomen was a tumor. It was rounded at both extremities, the largest end roundest and being to the right, the left end dipping down behind the uterus. The whole tumor could be defined by palpation to be separate from the uterine body, but connected—especially the large rounded end—with the right ovary and broad ligament. It was freely movable in the abdomen, of a firm fibroid feel, no bony projections, no cystic contents, no fluctuation in any part. Thorough evacuation of the bowels reduced the soreness and allowed the tumor to sink lower and seem more intimately connected with structures in the pelvis upon the right of the uterus.

Renewed questioning of the patient made a diagnosis even more difficult. As has been said, there had been no faintness at the time of seizure, no loss of consciousness then or subsequently, only the chill and the convulsions. The pain had not been very severe as long as she remained perfectly quiet. There had been no recurrence of alarming symptoms for sixty days.

However, an extra uterine pregnancy was diagnosed largely from the shape of the tumor, as it seemed possible to make out both the head and breech of a fœtus. The following probable sequence was deduced: Conception occurred on or near the 15th of June, 1893. Primary rupture took place August 20, 1893. The tube must have ruptured and the hemorrhage taken place into the cavity of the broad ligament, whose layers spreading apart confined the hemorrhage so that the bleeding was not fatal, but the distension was sufficient to produce bloating and obstruction though the embryo was not destroyed. It continued to develop in the cavity of the broad ligament until the secondary rupture took place October 20. How that rupture occurred, whether subperitoneally or intra-peritoneally, and if the latter, why it was not fatal, could only be determined by operation. False labor and death of the fœtus took place in March, 1894. The decidua was then expelled from the uterus, the fœtal sac ruptured, and the amniotic fluid escaped—through what channel could not even be guessed as the patient had supposed the fluid to be urine. The patient's abdomen had of course decreased in size and there was no questioning the fact that within three months she had again become pregnant—this time in the ordinary manner—and had aborted five days before.

An operation was of course advised. October 1, after the usual preparation, the patient's abdomen was opened in the right semi-lunar line. The incision was carried without event into the peritoneal cavity, and, to our surprise, directly upon the fœtus itself as there was no broad ligament covering. [See plate, fig. 1.]

The placenta which had first presented, and which was the large round end of the tumor, was then carefully dissected out. It was found rolled up in the broad ligament, attached to and partly covered by what looked and felt like a portion of the intestine. [See plate, fig. 2.]

But upon being traced down it was found to be the greatly distended tube, and was therefore ligated and cut off close to the uterus.

The patient convalesced satisfactorily and was discharged from the hospital the first week in November.

The manner of secondary rupture was explained by the operation. The broad ligament split from the person of the growing fœtus and it encircled in its membranes was expelled into the peritoneal cavity. The folds of ligament and distended tube continued to hold and nourish the placenta and so the fœtus went on to term. The escape of the amniotic fluid is possibly explained by the fact that the tube was partially intact and still open into the uterus.

Jessop's Case of Intra-Peritoneal Ectopic Gestation.

Lawson Tait on "Pelvic Hæmatocele and Ectopic Pregnancy."

"Now we come to the later stage, and the last division of my subject—the minority of cases where the ovum survives and grows towards the full time.

"During this process of growth the sec-

ondary rupture of the broad ligament sac may take place and prove fatal, as in the cases Monat, Bernitz and Mathews Duncan. Such an accident would give rise to alarming symptoms, similar to those observed in primary rupture, and so far as we know from a few recorded cases the accident would be quite as fatal. One case of such a rupture has been recorded which was not fatal, and in which the child was removed; and it forms an instance perfectly unique in the history of ectopic pregnancy, for the child was absolutely free in the peritoneal cavity, not encapsulated by cyst. Mr. T. R. Jessop, who records the case, puts it among what he calls, quoting the text-books, the 'abdominal variety.' If he had said 'intra-peritoneal variety' his language would have been more accurate; but as a matter of fact it stands by itself, and may therefore be known as *the* case of intra-peritoneal ectopic gestation. Fortunately no post mortem was necessary, but it is perfectly clear from the history that about the tenth week she had a 'rupture,' and that this was tubal is, in my belief, quite certain. If the pregnancy had ruptured its way into the peritoneum it would have been at once digested; for I am certain, from what I know of the digesting powers of the abdomen, no gelatinous fœtus of the tenth week could resist them. I interpret this case then, to be one where a broad ligament pregnancy on the right side went on till the seventh or eighth month, and that then a secondary rupture of the broad ligament cyst took place, the child escaped into the peritoneal cavity and continued its life amongst the intestines, its tissues having arrived at a period of development at that time which enabled them to resist the efforts of digestion which doubtless would be directed towards them. The ruptured cyst would contract and disappear towards its edges, and the placenta was found where it is found in the great bulk of broad ligament cysts, plastered over the pelvic contents."

Tait further describes the disposition of the peritoneum in the development of the extra-peritoneal ectopic pregnancy, demonstrating an entirely different condition of things from what was found in the case reported in this issue, which case must certainly take rank with the unique one of Dr. Jessop and the classification quoted above.

Tait says: "To understand the motive of this avoidance of the ordinary incision in dealing with a case of ectopic pregnancy, we must resort to the explanation already given of the process at the time of rupture, and to the views I have advanced, that all the full-term ectopic pregnancies are those which have grown in the broad ligament—extra-peritoneally. As they grow they separate the folds of the broad ligament, and finally lift the perineum slowly out of Douglas' pouch, off the rectum, sides and brim of the pelvis, off the posterior surface of the uterus, and off the back and sides of the lower abdominal walls as far round as a point corresponding to the cornu of the uterus on each side. The result of this is that the posterior and lateral levels of the reflections of the peritoneum are raised very materially, whilst the utero-vesical pouch is uninterfered with, and it remains as a long process, like the finger of a huge glove, running down in front of the gestation sac to its normal ending in the base of the bladder. The peritoneum is very easily lifted off any of the organs round which it is wrapped, if the process is slowly carried on.

The growth of the ovum, therefore, easily lifts the peritoneum everywhere if the *pull* is direct; but when the pull comes to be indirect, as it must be the moment the top of the fundus is reached, the lifting of the peritoneum ceases, and the long tubular process is formed. As the growth of the ovum is not quite symmetrical, this tube is sometimes on one or the other side, and sometimes in the middle, and therefore it is that some of my operations for ectopic gestation at the full time have been abdominal sections and some have not been. Therefore it is, also, that the opening in this case should be made not central but well to one side.

"This curious lifting of the peritoneum may, of course, be interrupted by a secon-

dary rupture of the [illegible]nto the peritoneum, and we may find what I have already indicated as a possibility, that direct primary rupture into the peritoneum of a tubal pregnancy of the twelfth week may end neither in the death of the mother nor in that of the child, but that it may go on developing in the peritoneum. I regard this as very unlikely and as yet wholly unproven."

As has been said in describing the operation of the case recorded in this issue, no such disposition of the peritoneum was found, nor could it have ever existed at any time during the sixteen months of extra-uterine pregnancy. The peritoneal lining was found intact, both on abdominal walls and brim and sides of pelvis. The rupture into the abdominal cavity was undoubtedly a secondary one, and at such a period that the child could resist the digestive powers of the peritoneum.

D. Berry Hart, of Edinburgh, after making a careful dissection of two subjects containing ectopic pregnancies, one dying from secondary rupture into the peritoneal cavity, the other a few weeks after full term, makes the following summary of the facts demonstrated by his frozen sections: "The chief interest centers on the anatomical nature of abdominal gestation. The second case shows that this can be extra-peritoneal, a fact never hitherto demonstrated, although strongly contended for by Tait. We do not deny that we may have either a partial extra-peritoneal and intra-peritoneal variety, or an entirely intra-peritoneal variety, but we ask for actual proof of such. If it be urged that a purely intra-peritoneal form must exist because placenta has been found attached to the uterus and intestine, we answer that in the cadaver shown the placenta has been attached to the portion of uterine wall where the peritoneum is stripped off, or it might have been attached to the other abdominal viscera, but yet carrying a layer of peritoneum before it, be still extra-peritoneal. We therefore hold that the following varieties have been demonstrated, viz.: Tubal, tubo-ovarian, sub-peritoneo-pelvic, sub-peritoneo-abdominal. An abdominal variety, partly intra-peritoneal and partly extra-peritoneal, is probable; a purely intra-peritoneal variety has yet to be demonstrated."

If a carefully studied case with operation, wherein conditions were verified with great attention to detail can prove this last variety of Hart's, the case herein recorded offers that proof.

Unfortunately for the further advancement of this study from the cadaver (fortunately, we trust, for the patient) no post mortem was possible, nor does it seem at all probable within the range of the ordinary time such a patient remains under a surgeon's supervision. Therefore the case has been reported as one presenting an unlooked for anatomical condition even in the limited authenticated varieties of extra-uterine pregnancy.

A Pregnant Tube in the Act of Abortion.

Dr. G. M. Edebohls presented to the New York Obstetrical Society a specimen illustrating a pregnant tube in the act of abortion, a report of which we reprint from the *American Journal of Obstetrics:*

The specimen consisted of the normal left ovary and the left tube dilated to a pear-shaped tumor ten centimetres in length, with a diameter at its thickest part of five centimetres. In the fresh state the surface of the tube presented a livid blue, intensely congested appearance, with a number of ramifying large vessels, mostly of the venous type. The walls of the tube were thickened at some places, much attenuated and ready to burst at others. The inner half of the tube was but slightly enlarged and thickened; the outer half and the ostium abdominale were distended by an intact ovum, the fetus being still completely enveloped by all of its membranes, the latter in an unbroken condition. The ovum was in the act of passing through the ostium abdominale into the peritoneal cavity, one-

third of it being already free of the tube in the abdominal cavity, the remaining two-thirds still within the tube. The ostium abdominale, at the point where it encircled the protruding ovum, was dilated into a thin ring four and a half centimetres in diameter. There was no indication anywhere of a rupture of the tubal wall.

The specimen was of interest from the fact that it afforded an opportunity to study a tubal abortion in progress, an opportunity which from the nature of things would only be afforded by the merest luck on the occasion of either a celiotomy or an autopsy. Immediately after the removal of the specimen the slightest pressure upon the pregnant tube would have sufficed to empty it completely. Indeed, to the operator's mind it seemed probable that the tubal abortion would have been found completed had the operation been deferred but two or three hours.

The age of the ovum it was impossible to determine accurately from the history. It was apparently about two months. That point, however, would be determined by Dr. J. Whitridge Williams, of Baltimore, who was engaged in a study of the subject of extra-uterine pregnancy, and for whom Dr. Edebohls wished to preserve the specimen intact.

The patient, K. K., a woman of 26, married nearly four years, was brought to him for examination on July 5, 1894, by her physician, Dr. James Geary. She began to menstruate at 15; type, four to five days every four weeks, with moderate pain on first dey of flow. She had a miscarriage in the early months in May, 1891, and gave birth to a still-born child of seven months on December 24, 1893. Seven months after this event her periods reappeared, and for a few months were somewhat irregular, the intervals varying from five to seven weeks. Last normal menstruation May 3, 1894. On June 1 the flow reappeared, accompanied by severe pains in the left groin. Ever since that time, a period of five weeks, she has suffered from irregular bloody discharges and persistent pain in the left groin.

Examination .— Right tube and ovary about normal in size and position. Behind and to left of uterus a globular tumor eight centimetres in diameter and quith sensitive on pressure. Uterus in normal anteversion, slightly enlarged. Cervix patulous and soft, with some eversion of the mucosa. Appendix vermiformis tender on pressure, though not enlarged. Right kidney movable eight to nine centimetres.

A positive diagnosis of pregnancy of the left tube was made and celiotomy with curettage of the uterus advised.

Operation July 10, 1894, with patient in good general condition.

1. Curettage and irrigation of uterus, removing a small quantity (two teaspoonsful) of decidual membrane.

2. Celiotomy. About thirty grammes of free blood in the peritoneal cavity. Pregnant left tube shelled out of some soft adhesions and removed with its ovary. Appendix vermiformis, the seat of a mild chronic inflammation and adherent to the right tube and ovary, was tied off at its base and removed. The right tube and ovary appeared fairly normal, with this exception, that the fimbriated extremity of the tube grasped the ovary and was firmly fixed in this position by rather strong adhesions. As both the patient and her husband were very desirous of offspring, the ovary was liberated from the grasp of the tubal ostium, the mucosa of the latter stitched to its peritoneal covering, and the range of mobility of the fimbriated extremity increased by a little plastic work upon the outer part of the right broad ligament; fundus uteri attached to anterior abdominal wall by a single catgut suture, temporary suspension only being contemplated; closure of abdomen without irrigation and without drainage. Patient left hospital, a well woman, August 6, 1894.

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AVOID a high altitude in heart lesion.

Celiotomy in Ectopic Gestation.

At the meeting of the American Society of Obstetricians and Gynecologists Dr. Werder read a paper on "Celiotomy in Ectopic Gestation" where the foetus is viable and living with report of a successful case. After a report of the history of the case and the operation, the author makes the following observations:

"Anatomically the case was undoubtedly one of tubal pregnancy with rupture between folds of broad ligaments; though not a purely intraligamentous pregnancy, from the fact that a part of the sac seemed to be formed of amnion only. There evidently had taken place a secondary rupture with extrusion into abdominal cavity, a part of the sac, however, remaining within the broad ligaments.

"There have been sixteen successful cases of celiotomy in ectopic gestation with living child at or near term, including Schauta's and Lusk's cases performed at the sixth month, in eleven—or, with the author's, in twelve—of which the placenta was removed with complete or partial enucleation of the sac, in five the sac and placenta were left and drained. The author recommends the removal of the sac and placenta in all cases where possible, and claims that by securing the ovarian artery, and its anastomosing branches of the uterine artery on the side of the gestation sac, this can be accomplished in the majority of cases. That the blood supplying the placental circulation is mainly derived from the ovarian and uterine arteries was well illustrated in the author's case, in which a frightful hemorrhage was promptly controlled by the compression of these blood vessels.

"In the exceptional cases in which it is impossible to remove the placenta, at least with any degree of safety, the author prefers leaving it without drainage, sealing the abdominal wound hermetically, and thinks this method safer than allowing it to slough out, exposing the patient to the great dangers of sepsis, venous thrombosis, etc. In leaving the placenta he advises to let it bleed from the dividing end of the cord, so as to lessen its size; to cut the cord quite close to the plecenta, and to remove all the amnion possible, stripping it off from the plecental surface, as it has been shown that such non-vascular tissues have greater tendency to decompose; and suggests, in addition, to tie the ovarian artery on that side, as by so doing the placental blood supply would be greatly diminished and shrinkage favored, though sufficient circulation would remain from adhesions to keep it alive. Should symptoms of sepsis arise the abdomen should be reopened at once.

"In regard to the time of operation, the welfare of the mother is first in importance and requires the greatest consideration, but he thinks that we are justified in postponing operation in the interest of the child, providing we do not jeopardize the chances of the mother thereby. We should therefore be largely guided by the condition of the mother, and in the absence of dangerous symptoms await the period of viability in the child, selecting as the most favorable period the end of the seventh or beginning of the eighth month."

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Topeka, Kansas, Saturday, Jan. 12, 1895.

Diabetes.

Diabetes mellitus presents a picture familiar enough to every physician, yet wrapped in such mystery that it has baffled medical skill in every land. It is often remarked that it is a disease the knowledge of which has not made many advances in proportion to the large amount of study that has been spent on it. While all are agreed that there is universally present a most profound interference in nutrition and the metabolic activity of tissue, there is a great diversity of opinion as to which particular organ is the real offender and wherein consists the offense. All writers upon diabetes give their chief attention to methods of treatment, the most complete of which they are ever ready to confess is never more than palliative. Much good work has been done, however, in the line of dietetic treatment, and observations have been carefully made upon the effect of prolonged continuance in the same, with many times very satisfactory results in the diminution in the quantity of sugar in the urine, and the prolongation of life. Chemistry has prepared sugar in such a way as to insure its oxidization in the system. Levulose has received much commendation from the hands of those who have used it. Diabetic breads, however, are acknowledged to be unreliable, only less common and no less abominable than the bulk of the baby foods that glut the market. But the most that can be said for all treatment of diabetes, whether dietetic or by the use of drugs, has been well said by one writer: "By their means a case of diabetes, while perhaps not cured in the ordinary acceptance of that term, may be rendered comfortable and life prolonged to almost if not quite the human limit."

Dr. William B. Canfield, in a clinical lecture upon diabetes, at the Bay View Hospital in Baltimore, makes the rather startling statement: "The treatment is principally dietetic. It is a disease in which we go back to the cause and try to remove it, and trust very little to drugs. The ideal treatment is to cut off all starch and sugar from the food."

The questions arise, "Is the ideal treatment of any disease to cut off all carbohydrates from the food, and can the dietetic treatment of glycosuria be properly termed attacking the cause, and is the patient's comfort the only chance in the battle with this disease?"

It seems too us that too little attention is being paid the definite results of experiment in the artificial production of glycosuria, and with that thought we have made the following extracts:

Sajon's Annual of Medical Sciences—Lepine of Lyons.

"Considering the great frequency of the alteration of the pancreas in diabetes—too great to be accidental—the variety of lesions and the experimental results, the author considers the evidence to be in favor of

a group of cases of pancreatic diabetes. Lepine's theory is that there is a failure of the glycolytic ferment, and he thinks that the wasting and muscular feebleness cannot be explained by the non-digestion of food, but must depend upon some other cause, apparently non - assimilation consequent upon a form of auto-intoxication, arising from substances normally excreted by the pancreas being retained within the organism and then forming leucomaines. This view is supported by the fact that tissue-wasting occurs both in cases of ligature of the pancreatic duct and of partial extirpation of the gland; and seeing that in these cases no sugar whatever is lost to the system, its mere loss of sugar cannot be regarded as explaining the tissue wasting. He confirms the fact that glycogen quickly disappears after removal of the pancreas. The pancreas produce the greater portion of glycolytic ferment or the greatest destruction of sugar, a theory which agrees with the best established facts up to date. The suppression of that source of ferment is the chief element in the production of diabetes. After complete removal of the pancreas outside the abdominal cavity, diabetes fails to appear if a fragment of the gland has been previously transplanted under the skin. The method employed consists in leaving the pancreas in connection with the intestine, and only grafting the tail under the skin. When the connection is made with the subcutaneous vessels the intra-abdominal portion of the pancreas is taken away. When the operation is successful the animal is rendered diabetic by the extirpation of the transplanted fragment—a relatively innocent and easy operation, since it can be done without opening the abdominal cavity."

Lepine's position then is this: Sugar appears in the urine from a decrease in the sugar-destroying element which exists in the blood and is stored in the pancreas, primarily, but also in the salivary gland and mucous follicles of the upper part of the small intestine. This sugar-destroying element he terms glycolytic ferment. When its chief source is cut off, either by disease or artificial means, the ferment still existing in the blood is utterly inadequate to cope with the amount of sugar passed into its stream. So it is naturally thrown off by the kidneys.

A word of physiology may not be amiss. Glycogen or animal starch is stored up in the liver in health to be taken up by the blood. The mother substance of glycogen is acknowledged to be the carbo-hydrates of the food, fat and proteids. When the storing up of glycogen is interfered with, and instead large quantities of grape sugar are precipitated into the blood to pass into the urine, the condition is known as diabetes.

Treat's International Annual of 1893.

Cases of diabetes associated with marked disease of the pancreas have been recorded during the past year. R. T. Williamson has tabulated one hundred cases of pancreatic disease thus associated, the most common changes being interstitial inflammation (cirrhosis) going on to complete fibrous atrophy. He suggests that if the cases could be diagnosed, they might be treated by implanting portions of living pancreas under the skin; and Minkowski has shown that in animals rendered diabetic by extirpation of the pancreas, the development of the disease may be checked by grafting pieces of pancreas in the tissues outside the abdominal cavity.

In the list of remedies to be depended upon in the palliative treatment of diabetes it has been quite the fashion of late to include large doses of extract of pancreas. The current number of the New York *Record* contains the following: "Dr. P. Watson Williams, of Bristol, England, reports three cases of diabetes treated with extract of pancreas, and he thinks that practically nothing can be accomplished by this mode of treatment as at present employed. Small wonder when the extract of pancreas as prepared by our chemists becomes an inert substance under the action of the gastric juice."

Certainly with the weight of evidence going to prove that this common and fatal

disease is an affection of the pancreas, it is incumbent upon the profession to test the efficacy of an artificial supply of pancreatic juice. With the brilliant results of the analogous treatment of myxœdema before our eyes, no other course can be more strongly indicated.

Whether this treatment is best accomplished by injection of the extract of the fresh pancreas into the tissues, or whether grafting portions of the gland will prove more effectual, can only be determined by experiment.

Diabetes following Traumatism. — The traumatisms most often followed by diabetes are those affecting the head; sometimes, also, those affecting the vertebral column. Sugar does not always appear in the urine immediately after traumatism, and in certain cases a series of nervous troubles fill up the period between traumatisms and the manifest beginning of diabetes. If the latter succeeds rapidly to traumatism, it is almost always mild; on the contrary, almost all uncured cases of traumatic diabetes begin late. When the vaso-motor, which proceed from the hepatic vaso-motor center, the floor of the lower part of the fourth ventricle, to the liver are cut or paralyzed in any of their course, glycosuria is produced. The paralysis of the blood vessels causes the liver to contain much blood, and the intra-hepatic blood stream is stirred. The disturbance of the circulation causes a great accumulation of sugar in the liver, as the blood ferment has time to act upon the glycogen and transform it into sugar.

Christ's Hospital, Topeka.

We are greatly pleased to note extensive improvements in Christ's Hospital, which add materially to the cnmfort of its patients, and the usefulness of the institution. Prominent among these are the new and commodious lavatories, conducted upon the latest and best sanitary principles. The tubs are luxurious affairs of porcelain; the closets perfect in all their appointments, and the plumbing of which, is in the highest style of this most important art. This much needed renovation will greatly conduce to the healthfulness of the institution and the better care of its patients.

The boiler room has been enlarged; additions made to the steam-heating apparatus, thus providing increased radiating power. We congratulate the hospital staff on the accession of these much needed improvements; improvements long necessary, but now happily consumated.

The training school for nurses, an important feature of this excellent hospital, of which Mrs. F. G. McKibbin, the efficient superintendent of the institution is the chief, is a school to which is attached a full corps of instructors. A complete course of lectures and demonstrations by the physicians and surgeons of the city, is a very prominent feature of the curriculum. Physicians in any portion of the state desiring the services of trained nurses, especially in the care of surgical or other cases, according to the most modern and improved aseptic principles, can be supplied by addressing the superintendent. Mr. W. I. McClure, Mrs. Jennie Charters, Miss Edetha M. Dodds and Miss Lillie Nichols were graduated from the training school in the year 1894, taking the prescribed two years course. In addition to this course, however, these four graduates have had from two to three years' practical experience under the skillful training of the most efficient superintendent, Mrs. F. G. McKibbin.

Diphtheria Antitoxic Serum.

We are informed by Lehn & Fink, of New York, that they are able to fill all urgent demands for serum, but they require that in every case the physician's order be sent to them accompanied by a statement as to the urgent need, and preferably a health board notice showing that a case of true diphtheria is under treatment. Numerous very satisfactory reports of the results of the treatment are being received and the demand for serum is increasing.

Education a Factor in the Prophylaxis of Diseases of Women.

BY FRANCES STORRS, A.B., M.D., TOPEKA.

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Fifty-one years ago Dr. Oliver Wendell Holmes, whose loss we mourn to-day, published a paper upon the contagiousness of puerperal fever, and struck the first blow for prophylaxis in the diseases peculiar to women. The clear argument of that famous classic won its way in the face of bitter opposition and learned opinion—this, too, without the aid of either microbe or microscope. To-day the spirit of that paper is recognized as the spirit of medical progress in the last half century. Prophylaxis has revolutionized the practice of medicine, and wrought a firm foundation for the splendid superstructures of our systems of State medicine and boards of public health. Parallel with the development of the prophylactic management of disease, even dependent upon that management for success, has been the growth and perfection of modern surgery. Hand in hand they have entered hospital and infirmary, wards for children and lying-in women, and the results have been good to hear.

It is a curious fact that to-day, in the department of gynecology, the socalled diseases of women, prophylaxis has been so nearly lost sight of, while surgery has usurped the field. I need not remind you of the multiplicity of the surgical articles upon gynecological subjects in medical literature during the past ten years, their name is legion, and many are already relegated to the dark ages; but the indices to our recognized authorities upon gynecology are worth considering for a moment, and will illustrate my point. In the "Cyclopædia of American Gynecology," published in 1888, we look in vain for any article relating directly to the etiology of the prevalence of disease among women. Indirectly several of the authors speak of the causes of certain conditions, but only in brief. Dr. George T. Harrison, in writing upon uterine displacements, in the second volume, makes the pertinent statement: "Prophylaxis is usually left out of the question by systematic writers."

In the "Cyclopædia of Gynecology," brought out by William Wood & Co., in 1887, chiefly the work of German writers, the eight volumes contain no reference to prophylaxis, and only very casual reference is made to etiology.

Pozzi deals only with pathological details and treatment.

Garrigues, in a work of 660 pages, devotes less than six to the discussion of "Etiology in General." Prophylaxis is spoken of here and there, but at no great length.

Thomas fifteen years ago, and the recent Thomas and Munde, devote one chapter to the etiology of uterine disease, and throughout these books, especially the latter work, appear constant hints as to the prevention of certain conditions. Tait has no chapter on etiology, but he never fails to make his opinions upon the causes of specific conditions clear.

There is little difference of expression in these scant comments upon etiology. Briefly the causes of these so common pathological conditions in women are of two varieties:

1. Etiological factors for which the woman is chiefly responsible.

2. Etiological factors for which someone else is chiefly responsible.

Under the first head belongs the list which Thomas gives: "Neglect of outdoor exercise; excessive development of the nervous system; improprieties of dress; imprudence during menstruation; imprudence after parturition; prevention of conception and induction of abortion; marriage with existing uterine disease"; and I add from Garrigues, "over-education, particularly in music." These women might prevent.

Under the second head: Child-bearing and its consequences, many evil results of which the doctor might prevent; and infection by the gonococcus, which in ordinary cases the husband might prevent.

Here are 85 per cent. of the diseases of

women. To the remaining 15 per cent. belong the neoplasms and malformations, which we shall turn over to the surgeon without protest or comment.

Concerning the last-mentioned etiological factor, the gonococcus: If the infection of the utero-tubal tract by the germs of gonorrhea meant inevitable, sudden death to the woman thus infected, some means would be found potent enough to reduce such fatalities to the minimum. But since it means only a life of such misery that death is a longed-for release, wives and mothers continue to be exposed to that infection; and too often, alas! the protection of the physician is given the offender rather than the innocent offended. And the modern gynecologist, secure in his new-found ability to diagnose pus tubes, views with complacency the seed-sowing that is everywhere before his eyes, and smiles a little as he contemplates the harvest of long rows of ticketed jars.

Concerning child-bearing as a cause of uterine disease, too much has been written to warrant even a passing remark from me. Yet something must be radically wrong somewhere, that so many neglected cases of lacerated cervix and perineum, with the accompanying subinvoluted uteri and long train of nervous symptoms, come into the specialist's hands.

It is with the first variety of etiological factors, however, that this paper has principally to deal. There seems to be a tendency in all these works to accept the present condition of women as an inevitable one, even implying that they prefer to be ill, and choose a life of pernicious dressing and reckless imprudence, especially to exaggerate nervous phenomena and induce uterine affections. What wonder that the art of extirpation has supplanted the science of prevention in treating such irrational beings, and that the very latest and most approved method of dealing with diseased pelvic organs is to preserve them entire in alcohol, as being too complicated a mechanism for the ordinary woman to be intrusted with!

It is far from my purpose to decry the results of surgical gynecology. No one realizes more keenly than I the utter futility of "treating" a tube distended with pus, and that we need no further demonstration of the fact that most pathological processes of long standing in the pelvis are only aggravated by much of the socalled conservative treatment.

But to return to the list of the causes of disease above quoted as being those for which woman herself is largely responsible. One of them is hardly worth a discussion.

Woman's dress bears the brunt of masculine denunciation whenever her ill health is mentioned; yet I venture to assert, as a matter I have been at no small pains to investigate, that nine-tenths of the women in the ordinary walks of life dress comfortably, and of the women who have learned to think for themselves, the other tenth, is busy inventing some advanc d and enlightened costume.

For all the rest of the imprudence, carelessness, and the like in that list enumerated, there is but one excuse, which is no more an excuse in dealing with physiological law than in the violation of the voice of civil authority, but which is too often pleaded as an excuse in both cases: that is ignorance, and an ignorance which is density itself.

Two great necessities, contingent upon mere physical existence, confront every woman; by conformity to their laws she must lose or win, live or die. Nature insists upon self-preservation and preservation of the species. Moreover, she scorns to perpetuate a deteriorating type. How little the ordinary wife and mother, even in these boasted *fin de siecle* days, knows of the real significance of life, of those mighty forces that know no deviation; and how little she is prepared for the part she must needs play, whether she will or no, in this fierce struggle for mere survival. If it takes three years of constant study and clinical observation to fit a man to wait upon a woman in confinement, and to faithfully discharge the few small duties nature has left undone at that time, how much longer ought it to take

to fit that woman for her part in the preceding nine months, and for the responsibility which becomes hers at that time?

Tait alone, of the authors whom I have mentioned, speaks of the ignorance of women in regard to the vital processes of their nature, as largely responsible for the prevalence of uterine disease. He condemns such ignorance as unnecessary and inexcusable, and suggests that it may be removed by the study of the analogous sciences; that the laws of reproduction are the same wherever manifested; and to the observer of plant life who has witnessed the development and understands the structural significance of anther, oviduct, and ovary, the ordinary processes of sexual life present no mysterious difficulty of comprehension. I may be pardoned for differing with so great an authority, but in my school-days, when fitting for college, with a head full of Latin, Greek, and pure mathematics, a very nice little work, written upon the analogous botany idea, was put into my hands as a safe and proper thing for me to read. I don't think it did me any harm, but it left a very confused idea of the semi-physiological, semi-sentimental aspect of the subject so distasteful that I never cared to investigate the subject further.

What all women need as a preparation for their highest function in life, is a thorough training in anatomy and physiology. That training should begin at an early age in preparation for the advent of menstruation, the physiological import of which process should be made as clear as our best authorities can make it. From fourteen to eighteen or twenty the aim of the young woman's training and education, in school and out, should be toward physical perfection. Systematic exercise in the gymnasium and out of doors should be a daily certainty, and the full process of gestation and parturition, with the development of the embryo, and the growth and needs of the infant, should be unfolded in continuous instruction.

Any interference in the natural order of development in the young girl should be taken in its very incipiency. Interference nutrition, which is often succeeded by pathological conditions only amenable to the surgeon's knife, may be easily handled in their early stages. When women turn their attention to acquiring physical fitness for motherhood, there will be less demand for the professional laparotomists.

In all seriousness, this is no Arcadian dream. There is not a mother alive but would spare her daughter the suffering she has undergone in acquiring the "Wisdom of Experience." The difficulty is, she does not know how, but she does feel her ignorance. Over and over again they say to me, "If I had only known."

More than that, there is a growing dissatisfaction with the results of our present system of higher education for woman. The women who go out from our colleges to fulfil the law of their destiny by becoming the mothers of families, feel that some very essential subjects are left out of our college curricula, and they would be glad enough to exchange a few books of Homer, or even the enjoyment of Dante in the original, for some sound facts about life and health.

Garrigues says that our girls are over educated, and especially in music. Not over educated, but educated in books too soon. Physical education must come first, and there will be plenty of time afterward for culture and art.

It doubtless has occurred to some of you that this paper would better have been read before some enthusiastic body of organized women, who might forthwith form themselves into a club for the collection of bones and the exchanging of specimens. Not at all. Clubs are well enough in their place, but this is a question involving the great modern principle of prophylaxis in medicine. If the diseases of women are many of them preventable, then should the medical profession have a care that they are prevented. If women are reasonable beings, and who would deny that they are, then they can be taught, and it is the medical profession who must decide what they are to be taught.

Dr. Holmes has given a priceless example to the profession of America, and he lived to see the second and third generations

rise up and call him blessed. No greater tribute can be paid his life and works than by the perpetuation of the spirit in which his work was done, the enthusiasm for the science of prophylaxis wherever disease is found.

What Is the Difference?

The United States Secret Service has notified the country of a new and very dangerous $20 silver certificate.

The bill is of a series of 1891, check letter C, plate number 5, J. Fount Tillman, Register, D. N. Morgan, Treasurer; portrait of Daniel Manning; small scalloped carmine seal. The note is well executed, and is printed from an etched plate. The paper on which this note is printed is of excellent quality, and contains the distributed silk threads to be found in the genuine.

Here is an imitation so perfect that it requires the skill of an expert to detect its fraudulent nature. In the hands of an ordinary person it would pass current as readily as a genuine bill, and yet the Government of the United States feels it to be its duty to warn its citizens against it, and every honest man will approve the action of the government and call it just, and would assist in the detection and punishment of those who perpetrated the fraud.

The United States reserves to itself the prerogative of issuing money. Its laws also give to the inventor or discoverer, for a term of years, the exclusive right to manufacture articles made after his design. To those who originate and apply a new name to an article of their manufacture, the laws give an equally indefeasible right.

A pharmacist examines with minnte care a specimen of Antikamnia, Lactopeptine, or other proprietary remedy. He thinks it is composed of certain substances. He finds that he can pvrchase three substances and make an imitation of the preparation more cheaply than he can purchase the genuine, and thus increase his profits.

The money counterfeiter and the pharmaceutical conterfeiter are both moved and instigated by the desire for gain, and yet there are a few pharmacists who pose before their communities as reputable men, who day after day are selling spurious articles of their own make, when a physician specifies and demands the genuine and original.

What is the moral difference between the offences?

Lycetol-Antiarthritic.

Lycetol is the tartrate of dimethylpiperazine and appears to be fully as effective as the base piperazine. Aside from the pronounced action of the latter as a uric acid solvent a favorable therapeutic effect can be anticipated from this preparation because its other component consists of tartaric acid which in the system, becomes converted into a carbonate and render the blood more algaline, besides exerting a diuretic influence. According to the theory accepted by many physicians as to the nature of gout, there is no increased formation of uric acid in this disease, but the blood of gouty persons is only faintly alkaline and therefore less capable of holding uric acid or the urates in solution. By the administration of this tartrate of a piperazine derivative, therefore, the combined effects of its compononts are secured. Lycetol possesses the additional advantages of having an excellent taste and of being non-hygroscopic. Its aqueous solution has an agreeable acid taste and does not excite repugnance when administered for a prolonged period. Dr. Wittzack who has employed lycetol in a number of cases of uric acid diathesis with satisfactory results, observed a considerable increase of the secretion of urine after its administration. The remedy was well tolerated without producing any disturbance of the general health, and under its use the gouty symptoms subsided, and recurrences were prevented, and a considerable diminution of urinary gravel occurred. Dose, 1.0 Gm. pro die.

"JUST as good." This is the same old story. Somebody is always presenting something which he thinks is just as good as the old and reliable preparation, and probably stating at the same time that the substitute is much preferred. Dr. E. J. Kempf, of Jasper, Ind., under date of Nov. 24, 1894, writes: "You could not induce me, with love or money, to swallow any of those high-falutingly named compounds represented to be just as good as antikamnia; then why should I inflict on my patients a punishment which I would not undergo myself."